

REMARKS

Claims 1-28 were elected and examined in the Action. Claims 29-83 are withdrawn. Claims 1-10 and 12-28 have been amended herein. Claims 1-83 remain pending in the Application. No new matter has been added. Entry of the amendment is respectfully requested. Reconsideration is respectfully requested. Support for the amendments is found in the original claims, Specification, and Drawings. For example, claim 1 has been amended to additionally recite subject matter found in original claims 5 and 6.

Comments on Examiner's Comment

Under the heading "Examiner's Comments" the Action asserts that the recited phrase "operative to" in the claims does not sufficiently differentiate the claims from the prior art. Applicants respectfully disagree. As indicated in MPEP § 2106(II)(C), "As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope." Applicants respectfully submit that each occurrence of "operative to" grammatically limits the claim scope with respect to the subject matter associated with the phrase "operative to".

For example, the recited language from original claim 16 referenced in the Action of:

wherein the computer processor is operative to store a digitally signed copy of the electronic document on the portable storage medium

is a clause which recites specific features which limit the recited computer processor. A proper grammatical analysis of claim 16 requires an interpretation that the recited computer must

include the feature to store a digitally signed copy of an electronic document on a portable storage medium. The recited language in claim 16 does not make this recited feature optional. Thus, this feature cannot be ignored when evaluating the claim for purposes of anticipation or obviousness.

In addition, a prior art computer that includes a floppy drive, CD-R or DVD-R does not inherently include the ability to store a digitally signed copy of an electronic document on the floppy disk, CD-R or DVD-R. Anticipation by inherency requires that the Patent Office establish that persons skilled in the art would recognize that the missing element is necessarily present in the reference. To establish inherency the Office must prove through citation to prior art that the feature alleged to be inherent is "necessarily present" in a cited reference. Inherency may not be established based on probabilities or possibilities. It is plainly improper to reject a claim on the basis of 35 U.S.C. § 102 based merely on the possibility that a particular prior art disclosure could or might be used or operated in the manner recited in the claim. *In re Robertson*, 169 F.3d 743, 49 U.S.P.Q.2d 1949 (Fed. Cir. 1999).

With respect to claim 16, there is nothing inherent in the mechanical structure or software associated with a floppy disk, CD-R or DVD-R included in a computer, which requires the computer processor to store a digitally signed copy of an electronic document thereon. A floppy disk, CD-R or DVD-R can be used by a computer without any need for the computer to ever store a digitally signed copy of an electronic document on the floppy disk, CD-R or DVD-R. Thus a showing of the mere existence of a computer with a floppy disk, CD-R or DVD-R does support the allegation that the features recited in claim 16 are known in the prior art.

Rejections Pursuant To 35 U.S.C. § 112

In the Action, claims 1-28 were rejected pursuant to 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is respectfully traversed.

This rejection is based on the reasoning that claims 1, 2, 5, 15, 17, and 19 allegedly recite method steps in an apparatus claim. Applicants respectfully disagree that apparatus claims 1, 2, 5, 15, 17, and 19 recite any method steps. The Action appears to regard clauses recited in these claims that have the format, "operative to [do something]" as corresponding to method steps that are improperly included in an apparatus claim. However, under a proper grammatical analysis of each of these claims, it is clear that such clauses cannot correspond to method steps.

The recited clauses beginning with "wherein the computer processor is operative to" are always used in the form of a dependent clause which modifies a previously introduced structural element (e.g., the computer processor). This follows from the use of the word "operative" which is a predicate adjective followed by a prepositional phrase "to . . .". (e.g., "operative to output . . .", "operative to cause . . .", "operative to communicate . . ." and "operative to generate . . .")

The predicate adjective and prepositional phrase further recite attributes of structural features of the claim. In contrast, clauses in the form of a method step do not have a grammatical structure designed to correspond to an adjective that modifies structural elements.

The Action references *IPX Holdings LLC v. Amazon Inc.*, 77 U.S.P.Q.2d 1140 (CA FC 2005) and *Ex parte Lyell*, 17 U.S.P.Q.2d 1548 (B.P.A.I. 1990), in support of the rejection. However, these cases do not support the assertions that clauses such as "wherein the computer processor is operative to . . ." correspond to method steps in an apparatus claim.

For example, in *Ex parte Lyell*, the method steps in the referenced apparatus claim 2 all begin with a gerund (e.g., a word ending in "ing") such as "positioning the output end . . .", "removing the internal components of . . .", "repairing and replacing said internal components.. ." and "adjusting said internal components . . ." Such gerund clauses do not serve as structural elements or adjectives that define attributes of a structural element recited in the claim. Similarly in claim 2 of *IPXL Holdings LLC* the clause "and the user uses the input means . . ." is a second clause of a compound sentence. This second clause only informs the reader what a non-structural element (e.g., the user) does. This clause does not clearly recite any structure, nor does it clearly modify or define attributes of previously introduced structural elements of the apparatus.

Applicants respectfully submit that none of claims 1-28 recite language either in the form of a gerund clause method step as found in *Ex parte Lyell* or in the form of a "user uses" clause as in *IPXL Holdings LLC*. Thus the assertion that phrases beginning with "operative to" in claims 1-28 recite method steps is without any basis in either the cases cited or in a proper grammatical interpretation of the claims.

Further the Action indicated that language recited in pending claim 2 of "wherein the at least one second input includes the confirming input" also corresponds to a method step. However, again this recited phrase in claim 2 clearly modifies attributes of previously introduced structural features (e.g., what the recited element of a computer processor is responsive thereto). This recited language is in the form of a modifying clause that limits the previously introduced structural element of a computer processor. Thus the finding that claim 2 recites a method step is without basis.

Applicants respectfully submit that the 35 U.S.C. § 112, second paragraph rejection with respect to claims 1-28 is clearly erroneous and should be withdrawn.

Rejections Pursuant To 35 U.S.C. § 103(a)

In the Action claims 1-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Holmes, U.S. Patent No. 6,848,048. Also, claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Holmes in view of Otway, U.S. Patent No. 6,192,130. These rejections are respectfully traversed.

Claim 1

Claim 1 is an independent claim directed to an apparatus comprising an ATM. Neither Holmes nor Otway (cited against claim 20) disclose or suggest all of the features and relationships recited in claim 1. For example, neither reference discloses or suggests an ATM with a computer processor, or any other type of system that is operative to

cause the at least one display device to output a visual representation of at least one electronic document through the display device; and

cause a remote server to: access a private key responsive to the at least one financial account number read from the card; and cause the at least one electronic document for which the visual representation is outputted through the at least one display device, to be digitally signed with the private key accessed by the remote server.

Neither Holmes nor Otway discloses or suggests that either of their described systems has these recited features. For example, Holmes indicates that the private key is stored on a smart card

(290) (Column 4, lines 51-53). When digitally signing documents, the user connects the smart card 290 to the card reader/writer 285 on the personal identification device (275) (Column 4, lines 62-65). The smart card includes the encryption algorithm and software for generating the digital signature based on the private key or the smart card downloads the private signing key stored therein to the processor subsystem (280). Otway is directed to transferring security key history data associated with a subscriber.

Neither of these systems discloses or suggests an ATM that uses financial account number to enable the digital signing of an electronic document displayed by the ATM. Neither reference discloses or suggests an ATM or other system that is operative to read a financial account number from a card and cause a remote server to access a private key responsive to the financial account number read from the card. Also, neither reference discloses or suggests an ATM or other system that causes an electronic document for which a visual representation is outputted through a display device of the ATM to be digitally signed with the private key accessed by the remote server responsive to the financial account number. *Prima facie* obviousness cannot be established with the applied art. Thus withdrawal of the rejection is respectfully requested.

In addition, the Action makes a number of assertions which are not supported by the cases cited in the Action. For example, the Action asserts that features recited in claims with respect to subject matter displayed by a display device are "non-function descriptive material" because "the electronic document is not functionally related to the display and therefore cannot be used to differentiate Applicants' device from the prior art display of Holmes." The Action references MPEP § 2106 II; *In re Gulack*, 703 F.2d 1381, 1385, 217 U.S.P.Q. 401,404 (Fed. Cir. 1983); *In re Ngai*, 367 F.3d 1336, 70 U.S.P.Q.2d 1862 (Fed Cir. 2004); and *In re Lowry*, 32 F.3d

1579, 32 U.S.P.Q. 2d 1031 (Fed. Cir. 1994). However, such references do not support these assertions.

In re Gulack is directed to the issue of whether printed matter can be sufficient to distinguish a claim in view of the prior art for purposes of overcoming 35 U.S.C. § 103(a) obviousness rejections. In this case the rejections were overturned and the printed matter was accorded patentable weight and was not obvious over the prior art.

Further, *In re Gulack* stated that "Differences between an invention and the prior art cited against it cannot be ignored merely because those differences reside in the content of the printed matter. Under Section 103, the board cannot dissect a claim, excise the printed matter from it, and declare the remaining portions of the mutilated claim to be unpatentable. The claim must be read as a whole." *Id.* at 403. In this case, the Court found that a functional relationship does exist between the printed matter and the substrate as recited in the claims of the application at issue. Further, the Court stated that:

A function's relationship of the precise type found by the CCPA in *Miller* -- to size or type of substrate, or conveying information about the substrate -- is not required. What is required is the existence of *differences* between the appealed claims and the prior art sufficient to establish patentability. The bare presence or absence of a specific functional relationship, without further analysis, is not dispositive of obviousness. Rather the critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate. *Id.* at 404.

The Court further stated that the patentable differences between the claims at issue in *In re Gulack* and the prior art resided in the particular sequence of digits and in the derivation of that

sequence of digits. The prior art at issue in that case did not disclose or suggest these features of the printed matter, and as a result the Court reversed the obviousness rejections. *Id.* at 405.

With respect to *In re Ngai*, the Court found that instructions in a kit were not functionally related to the kit for the reason that "the printed matter in no way depends on the kit, and the kit does not depend on the printed matter." *Id.* at 1864.

With respect to *In re Lowry*, the Court stated that a printed matter rejection under Section 103 stands on questionable legal and logical footing. *Id.* at 1034. Further, *In re Lowry* held that data structures stored in memory can be patentable subject matter. Therefore it is not clear how *In re Lowry* is relevant to the rejections in the present case. *Id.* at 1036.

As with *In re Gulack* and unlike *In re Ngai*, the claims of the present application recite visible features (e.g., the "visual representation of the at least one electronic document") which are functionally related to other structures in the claim. For example, claim 1 specifically recites that the computer processor in the ATM is operative to cause "the at least one electronic document for which the visual representation is outputted through the at least one display device, to be digitally signed". Claim 1 functionally links what was displayed on the display device to what is caused to be digitally signed by the structural element of the claim. Thus the structural features of the claim depend on and are functionally related to the visual representation.

It follows that the recited features associated with the output of a visual representation of the electric document on the display device of the ATM are positive limitations and cannot be ignored for purposes of determining the patentability of the claim.

In addition with respect to the subject matter associated with the recitation of "an account number" (in original claim 6), the action also asserts that "this is representative of non-functional descriptive material as the account number is not functionally related to the

computer processor . . . and therefore cannot be used to differentiate Applicants' processor from the prior art processor of Holmes." Applicants respectfully disagree.

As with *In re Gulack* and unlike *In re Ngai*, the "at least one financial account number" (now recited in claim 1) is functionally related to other structures in the claim. For example, claim 1 specifically recites that the computer processor in the ATM is operative to cause "the card reader to read the at least one financial account number from a card." This language requires the recited apparatus to have the structural features that read a financial account number from a card. In addition, claim 1 specifically recites that the "computer processor is operative responsive to at least one second input through the at least one input device to cause a remote server to: access a private key responsive to the at least one financial account number read from the card." This language requires the recited apparatus to have the structural features to cause a remote server to access a private key responsive to the financial account number read from the card. Thus claim 1 functionally links the recited financial account number to the capabilities of the recited card reader and computer processor with respect to its features for interacting with a remote server. Thus the structural features of the claim depend on and are functionally related to the recited financial account number.

It follows that the recited features associated with the financial account number are positive limitations and cannot be ignored for purposes of determining the patentability of the claim.

The Action also incorrectly asserts that "claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function alone." MPEP § 2214; *In re Swineheart*, 439 F2d 210,169 U.S.P.Q. 226 (C.C.P.A. 1971); and *Schreiber*, 128 F3d 1473, 44 U.S.P.Q.2d 1429 (Fed. Cir. 1997) referenced in the Action do not support these assertions.

MPEP § 2214 is directed to the content of a request for *ex parte* reexamination. Thus it is unclear what is the relevance of MPEP § 2214. *In re Swineheart* states the opposite of the Action's assertions, with a holding that "We are convinced that there is no support, either in the actual holdings of prior cases or in the statute for the proposition, put forward here, that "functional" language, in and of itself, renders a claim improper". *Id* at 229. Also *Schreiber* references *In re Swineheart* for the proposition that "A patent application is free to recite features of an apparatus either structurally or functionally." *Id* at 1432. It follows that the Office cannot ignore functional features and relationships recited in the claims when determining the patentability of a claim.

The applied references do not disclose or suggest each of the features and relationships recited in claim 1, and the Office has not established *prima facie* obviousness. Also, as nothing in the cited art discloses or suggests the features and relationships that are specifically recited in the claim, and because there is no apparent reasons for combining features of the cited references so as to produce Applicants' invention, it is respectfully submitted that claim 1 is allowable for these reasons. Therefore, it is respectfully submitted that the 35 U.S.C. § 103(a) rejection should be withdrawn. It follows that claims 2-27 which depend from claim 1 are likewise allowable.

Claim 28

Claim 28 has been amended to be an independent claim. The arguments discussed with respect to claim 1 are hereby incorporated herein with respect to claim 28. Neither Holmes nor Otway (cited against claim 20) discloses or suggests all of the features and relationships recited in claim 28. For example, neither reference discloses or suggests an apparatus comprising an ATM with a computer processor or any other type of system that is operative to:

cause the display device to output a visual representation of at least one electronic document;

cause the at least one electronic document for which the visual representation is outputted through the display device to be digitally signed and stored in a remote server in association with the at least one financial account number read from the card (by a card reader in the ATM);

cause the cash dispenser to dispense cash responsive to at least one communication between the ATM and a remote server, which at least one communication includes the financial account number.

Neither reference discloses or suggests an ATM or other system that is operative to read a financial account number from a card, cause a display device to output a visual representation of an electronic document, cause the electronic document to be digitally signed, and cause the electronic document to be stored in a remote server in association with the at least one financial account number read from the card. Further, neither reference discloses or suggests an ATM or other system that uses of a financial account number for both the dispense of cash and the storage of an electronic document digitally signed through operation of the ATM and displayed by the ATM. *Prima facie* obviousness cannot be established with respect to the applied art. Therefore, it is respectfully submitted that the 35 U.S.C. § 103(a) rejection of claim 28 should be withdrawn.

The Dependent Claims

Each of the dependent claims depends directly or indirectly from an independent claim. The independent claims have been previously shown to be allowable. "If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious" (MPEP 2143.03). *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Thus, it is respectfully submitted that the dependent claims are allowable on the same basis.

Furthermore, each of the dependent claims additionally recites specific features, relationships, and/or steps that patentably distinguish the claimed invention over the applied art. Neither Holmes nor Otway, taken alone or in combination, discloses or suggests the features, relationships, and/or steps that are specifically recited in the dependent claims. Thus, it is respectfully submitted that the dependent claims are further allowable due to the recitation of such additional features, relationships, and/or steps.

For example with respect to claim 19, claim 17 from which claim 19 depends has been amended to positively recite the remote server as an element of the apparatus. Both the features of the remote server and the ATM recited in claim 19 distinguish the claim over the applied art.

Claim 20

Claim 20 depends from claim 17 and recites that the computer processor is operative to retrieve the private key from the remote server and the at least one computer processor is operative to generate a digital signature responsive to the at least one electronic document and the private key.

The Action appears to admit that Holmes does not teach that its computing device obtains a key from a remote server. However, the Action asserts that it would be obvious to combine the teachings of Holmes and Otway in order to allow a user whose private key was compromised to obtain a new private key. Applicants respectfully disagree.

In Holmes the private key is stored on the smart card (290) (Column 4, lines 51-53). Even if it were possible to modify Holmes to include the subject matter of Otway, the resulting combination at best would only produce a system that enables a new private key to be obtained by a smart card. There is no teaching or suggestion or apparent reason in either Holmes or Otway to modify Holmes to negate using a smart card to sign a document and instead to retrieve a private key from a remote server for purposes of signing the electronic document.

The Office has not established *prima facie* obviousness with respect to claim 20, and it is respectfully submitted the rejection should be reversed.

Conclusion

The undersigned will be happy to discuss any aspect of the Application by telephone at the Examiner's convenience.

Respectfully submitted,



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